Abstract

The invention relates to a method and a circuit arrangement for the precise, dynamic, digital control of especially piezoelectric actuators for micropositioning systems, comprising a regulator, whereby in order to minimise position order deviations the future system behaviour is estimated and current correction signals for the purpose of a feedforward correction are obtained. According to the invention, the signal of the command variable is passed via a switchable bypass to a digital/analog converter with highest resolution for the pupose of reducing the latency times in the feedforward loop of the sampling system, with said converter being operated at the sampling rate of the sampling system. The feedforward loop leads to a fast digital/analog converter which is controlled independent of the sampling system. The output signals of the converters, which represent control voltages are supplied in an added-up form to the device to be controlled, in particular, to a piezoelectric actuator which together with a position sensor forms the controlled system.